



THE  
**AGRICULTURAL LEDGER.**

1898—No. II.

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**ANANAS SATIVA.**

(PINE APPLE.)

DICTIONARY OF ECONOMIC PRODUCTS, Vol. I., A. 1046-57.]

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**PINE APPLE FIBRE.**

*Review of Correspondence showing results of a chemical examination in the  
Scientific Department of the Imperial Institute of a sample of the fibre  
prepared in Assam.*



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- (1) To provide information connected with agriculture or with economic products in a form which will admit of its ready transfer to ledgers ;
- (2) To secure the maintenance of uniform ledgers (on the plan of the Dictionary) in all offices concerned in agricultural subjects throughout India, so that references to ledger entries made in any report or publication may be readily utilised in all offices where ledgers are kept ;
- (3) To admit of the circulation, in convenient form, of information on any subject connected with agriculture or economic products to officials or other persons interested therein ;
- (4) To secure a connection between all papers of interest published on subjects relating to economic products and the official Dictionary of Economic Products. With this object the information published in these Ledgers will uniformly be given under the name and number of the Dictionary article which they more especially amplify. When the subject dealt with has not been taken up in the Dictionary, the position it very possibly would occupy in future issues of that work will be assigned to it.

(Vegetable Product Series, No. 42.)  
(Fibres.)

THE  
AGRICULTURAL LEDGER.

1898—No. 11.

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(*Dictionary of Economic Products, Vol. I., A. 1045-57.*)

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PINE APPLE FIBRE.

*Review of Correspondence showing results of a chemical examination in the Scientific Department of the Imperial Institute of a sample of the fibre prepared in Assam.*

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The Honourable Mr. Buckingham, C.I.E., of Amguri, Assam, forwarded to the Reporter on Economic Products a small sample of pine apple fibre for valuation by an expert. The sample was considered too small to send to the Imperial Institute. It was accordingly submitted to the Calcutta Chamber of Commerce with a request that, if possible, a note might be furnished as to quality and market value of the fibre. The Secretary to the Chamber replied, stating that on inquiry it had been ascertained there was no local market for such material, and that hence a valuation could not be given. The Secretary suggested, however, that a quotation for the fibre might possibly be forthcoming in London.

The attempt to obtain an Indian valuation having failed, the sample was transmitted to the Imperial Institute, London, for favour

INTRO-  
DUCTORY.

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## The Agricultural

**ASSAMAS  
active.**

**Pine Apple**

**RECEIVED**

of expert's opinion. On its reaching Sir F. A. Abel he kindly wrote as follows :—

*From Sir F. A. Abel, Bart., K.C.B., Honorary Secretary and General Director, Imperial Institute, to George Watt, Esq., M.B., C.M., C.I.E., Reporter on Economic Products to the Government of India, Indian Museum, Calcutta. — No. 126-B (Flying Seal Series, No. 113), dated London, the 20th May 1897.*

With reference to a sample of pine apple fibre from Assam, which has been handed to me by Mr. Royle, for submission to practical Experts, I have to state that enquiry has been made of one of our Referees as to whether a few pounds of the material can be supplied at once for textile purposes, as he believes he is enabled to have this done by a new process, which is giving good results with other fibres.

I thought it right to communicate this enquiry to you without loss of time.

This was replied to by R. E. P. No. 1415—67 F.S., dated the 6th July 1897, stating that a further sample had been asked for. R. E. P. No. 1636—67 F. S., dated the 4th August 1897, subsequently advised the despatch of a further quantity, 3lb, of the pine apple fibre in question. The following communication was received in due course from the Imperial Institute :—

*From Sir F. A. Abel, Bart., K.C.B., Honorary Secretary and General Director, Imperial Institute, to George Watt, Esq., M.B., C.M., C.I.E., Reporter on Economic Products to the Government of India, Indian Museum, Calcutta. — No. 267-B (Flying Seal Series, No. 121), dated London, the 6th November 1897.*

Referring to your letters of the 6th July and the 4th August, sent in response to my application for a somewhat larger sample of pine apple fibre than that forwarded by you to Mr. Royle in January of this year, I have now the pleasure of communicating to you the results of chemical examination of the fibre, and the opinion furnished by our Expert Referee for fibres with regard to its quality and value.

The results furnished by examination of the specimen first received, by the comparative method followed in all instances in the Scientific Department, are as follows :—

The fibre contained 0.9 per cent. of mineral constituents or ash ; 11.33 per cent. of moisture in its normally dry condition ; and the percentage of cellulose was 80.87. Its loss in weight by submission to (A) Hydrolysis amounted to 14.21 per cent. and by (B) Hydrolysis

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| Fibre.  | ANALYSIS.  |
|---|--|
| <p>to 17.12 per cent. Treated by the mercerising process it lost 17.32 per cent.; its acid purification entailed a loss of 1.52 per cent.; and it gained 35.83 per cent. by nitration.</p>  | <p>CHEMICAL<br/>EXAMINATION.</p>                                 |
| <p>The average length of the ultimate fibre was 2.6 min., but, on submission of the second sample received to practical tests, the yield of "line" or long spinning fibre was much higher in proportion than that obtained from medium European flax; and the spinning qualities of the long, as well as of the shorter fibre, are reported to be good. The second sample received was too small to yield exact practical results, but, so far as can be judged by its behaviour, the fibre is very promising in character, and, when well prepared, yields material, more nearly resembling flax in character than hemp which would be very suitable for spinning into fine twine, and for textile purposes, if it be properly softened.</p>   | <p>Comparison<br/>favourably<br/>with<br/>European<br/>Flax.</p> |
| <p>It is considered that the results furnished by the sample under examination are sufficiently good to warrant the recommendation that a sample shipment of at least five tons be made to England for trial purposes. That quantity would suffice to yield exact practical results on a fair working scale, as to its application by spinners, etc., to various purposes. The fibre would have to be submitted to a preparing process which would not be costly, and would be available for use in India if it be considered desirable eventually to treat it on the spot, after its value had been thoroughly determined here.</p>  | <p>Shipment<br/>in quantity<br/>suggested.</p>                   |
| <p>At the present time, the value of fairly clean fibre in the London market would probably be from £20 to £25 per ton. A specimen of the "line" or long thin fibre furnished by the sample operated upon, is forwarded herewith.</p>   | <p>Valuation.</p>  |
| <p>Regarding the question of supplying the fibre in considerable quantity, the R. E. P. replied as under :—</p> <p><i>From George Watt, Esq., M.B., C.M., C.I.E., Reporter on Economic Products to the Government of India, Indian Museum, to Sir F. A. Abel, Bart., K.C.B., Honorary Secretary and General Director, Imperial Institute, London, -No. 2851-57 F. S., dated Calcutta, the 22nd December 1907.</i></p> <p>I have the honour to acknowledge, with thanks, the receipt of your letter No. 347—3 (Flying Seal Series No. 121), dated the 4th November last, communicating the results of chemical examination of a sample of pine apple fibre and of the opinion furnished by the Expert Referee for fibres of the Imperial Institute with regard to its quality and value. The sample in question was furnished by the</p> <p style="text-align: right;">A. 1045-57.</p> |  |

ANANAS  
Sativa.

Pine Apple

QUESTION  
ANSWER

Honourable Mr. J. Buckingham, who obtained it from a small experimental cultivation of the plant at Amguri in Assam.

With reference to the proposal now made for the supply of five tons of the fibre, I have the pleasure to forward herewith an extract from my letter No. 2738-67, dated the 9th instant, to the address of Mr. Buckingham. My ability to comply with your request for so large a quantity will very greatly, if not entirely, depend on Mr. Buckingham's reply.

*Extract from letter No. 2738-67, dated the 9th December 1897, to the Honourable Mr. J. Buckingham, Amguri, Assam.*

In continuation of previous correspondence (ending with the office No. 1606-67, dated the 2nd August 1897), I have now the pleasure of forwarding to you copy of the report just to hand from the Imperial Institute on your sample of pine apple fibre furnished with yours of the 15th July last. I enclose a very small sample of the fibre as cleaned by the experts of the Institute. You will see that the report is of a most encouraging nature. I shall be glad to hear from you with regard to the proposal to furnish the Institute with five tons of the fibre. I fear that is beyond your present capability, and that, before you could do so, it would be necessary to lay out a fairly large experimental plot. From what I saw of the luxuriant growth of the pine apple in your garden and indeed all over Assam, I should think it highly probable that you may be instrumental in the establishment of a new industry to the province. I should like to have your views on the matter before any further action is taken. . . . If you contemplate starting the industry on a large scale and would rather that publicity was not, however, given to the results so far attained, I shall of course publish nothing for a time.

The following letter and its enclosure shows action taken so far in the matter of obtaining the larger supply of pine apple fibre as suggested by the Expert Referee at the Imperial Institute:—

*From George Watt, Esq., M.B., C.M., C.I.E., Reporter on Economic Products to the Government of India, to Sir F. A. Abel, Bart., K.C.B., Honorary Secretary and General Director, Imperial Institute, London, —No. 2825-67 F., dated Calcutta, the 30th December 1897.*

In continuation of my letter No. 2851-67 F. S., dated the 12nd December 1897, on the subject of pine apple (*Ananas sativa*)  
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| Fibre.  | ANANAS<br>sativa.                      |
|---|--|
| <p>Now, I have the honour to forward, herewith, extract from the letter, dated the 18th instant, from the Honourable Mr. J. Buckingham, C.I.E., of Amguri, Assam, for your information, and to add that, although some delay must necessarily occur, it may be expected Mr. Buckingham will ultimately fulfil his engagement.</p> <p><i>Extract from letter, dated the 16th December 1897, from the Honourable Mr. J. Buckingham, C.I.E., Amguri, Assam.</i></p> <p>I am much obliged to you for your letter of the 9th instant, regarding pine apple fibre: it is very satisfactory to learn that the fibre is so well reported on. As you observe, it is out of the question getting any quantity now, as the plant must be grown especially for fibre, and not fruit; it is necessary to grow the plants in shade and the fruit under such influence is practically <i>nil</i>.</p> <p>I shall at once lay out about 5 acres as an experimental plot. I have enough plants now for at least 3 acres.</p> <p>I am much obliged for the help you have given me in this. By all means publish whatever you think fit about the fibre.</p> | <p>PROPOSED<br/>CULTIVA-<br/>TION.</p> |

A. 1045-57.





All communications regarding THE AGRICULTURAL LEDGER should be addressed to the Editor, Dr. George Watt, Reporter on Economic Products to the Government of India, Calcutta.

The objects of this publication (as already stated) are to gradually develop and perfect our knowledge of Indian Agricultural and Economic questions. Contributions or corrections and additions will therefore be most welcome.

In order to preserve a necessary relation to the various Departments of Government, contributions will be classified and numbered under certain series. Thus, for example, papers on Veterinary subjects will be registered under the Veterinary Series; those on Forestry in the Forest Series. Papers of more direct Agricultural or Industrial interest will be grouped according as the products dealt with belong to the Vegetable or Animal Kingdom. In a like manner, contributions on Mineral and Metallic subjects will be registered under the Mineral Series.

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This sheet and the title-page may be removed when the subject-matter is filed in its proper place, according to the letter and number shown at the bottom of each page.

## NOTICE.

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Future issues of this publication placed under either the "Special Veterinary" or "Special Forest Series" will not be included in the annual enumeration. Such papers are printed for Departmental purposes. Their unfortunate inclusion in the system of annual numbering has led recipients of the ordinary issues to think their sets incomplete.

The following pamphlets have already appeared as Special issues, and have accordingly been furnished to the public:—

|      |   |   |                               |
|------|---|---|-------------------------------|
| 1894 | . | . | Nos. 8, 9, 10, 11, 13 and 15. |
| 1896 | . | . | No. 8.                        |

